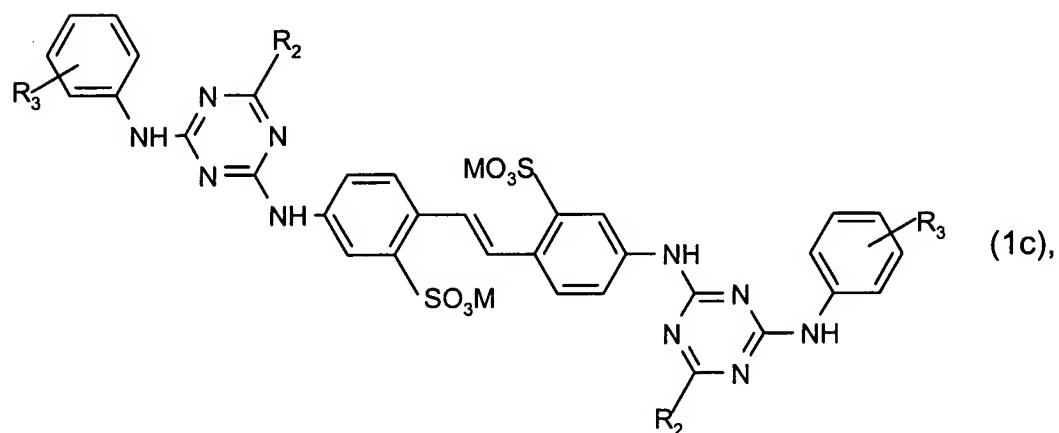
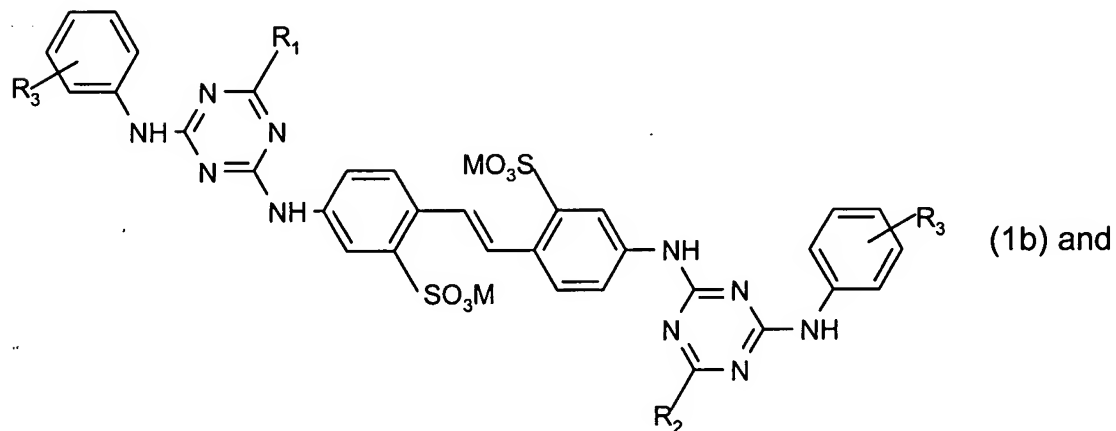
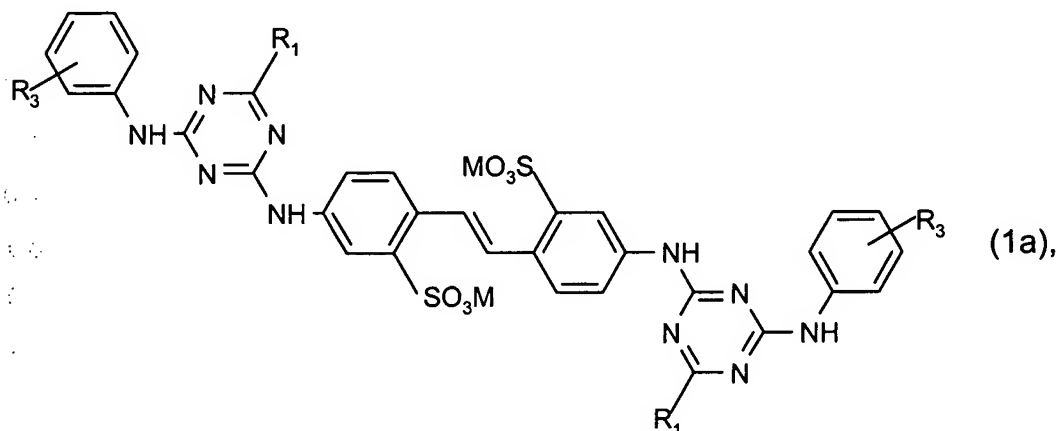


Claims

1. **(currently amended)** A fluorescent whitening agent, which comprises a mixture of two symmetrical compounds (1a) and 1(c) and one asymmetrical compound 1(b) ~~compounds~~ of the formulae



in which R_1 and R_2 are different and each

R₁ represents -NH₂, -NHC₁-C₄alkyl, -N(C₁-C₄alkyl)₂, -NHC₂-C₄ hydroxyalkyl, -N(C₂-C₄hydroxyalkyl)₂, -N(C₁-C₄alkyl)(C₂-C₄ hydroxyalkyl), a morpholino, piperidino or pyrrolidino residue,

R₂ represents -NH₂, -NHC₁-C₄alkyl, -N(C₁-C₄alkyl)₂, -NHC₂-C₄ hydroxyalkyl, -N(C₂-C₄hydroxyalkyl)₂, -N(C₁-C₄alkyl)(C₂-C₄ hydroxyalkyl), a morpholino, piperidino or pyrrolidino residue
or an amino acid or an amino acid amide residue from which a hydrogen has been removed from the amino group,

each R₃, independently, represents hydrogen, C₁-C₄alkyl or C₁-C₄alkoxy and

M represents hydrogen, an alkali metal atom, ammonium or a cation formed from an amine.

2. **(original)** A composition according to claim 1, in which R₃ represents hydrogen.

3. **(previously presented)** A composition according to claims 1, in which the aliphatic amino acid or amino acid amide residue is of the formula

-NR₄-CH(CO₂H)-R₄ (2) or -NR₄-CH₂CH₂CONH₂ (3),

in which each

R₄ and R₄', independently, represent hydrogen or a group having the formula

-CHR₅R₆ in which

R₅ and R₆, independently, are hydrogen or C₁-C₄alkyl optionally substituted by one or two substituents selected from the group consisting of hydroxy, thio, methylthio, amino, carboxy, sulfo, phenyl, 4-hydroxyphenyl, 3,5-diiodo-4-hydroxyphenyl, β-indolyl, β-imidazolyl and NH=C(NH₂)NH-

4. **(currently amended)** A composition according to claim 3, in which residues R₄ and/or R₂ are derived from glycine, alanine, sarcosine, serine, cysteine, phenylalanine, tyrosine (4-hydroxyphenylalanine), diiodotyrosine, tryptophan (β-indolylalanine), histidine ((β-imidazolylalanine), α-aminobutyric acid, methionine, valine (α-aminoisovaleric acid), norvaline, leucine (α-aminoisocaproic acid), isoleucine (α-amino-β-methylvaleric acid), norleucine (α-amino-n-caproic acid), arginine, ornithine (α,δ-diaminovaleric acid), lysine (α,ε-diaminocaproic acid), aspartic acid (aminosuccinic acid), glutamic acid (α-aminoglutaric acid), threonine, hydroxyglutamic acid and taurine, as well as mixtures and optical isomers thereof, or from iminodiacetic acid or from N-(propionamido)-N-(2-hydroxyethyl)amine.

5. **(currently amended)** A composition according to claim 1, in which ~~R₁ and R₂~~ represents -NHC₂-C₄hydroxyalkyl, -N(C₂-C₄hydroxyalkyl)₂, -N(C₁-C₄alkyl)(C₂-C₄hydroxyalkyl), a morpholino residue or a residue derived from glycine, sarcosine, taurine, glutamic acid, aspartic acid or iminodiacetic acid.

6. **(currently amended)** A composition according to claim 5 in which ~~R₁ and R₂~~ represents a mono-(2-hydroxyethyl)amino, a di-(2-hydroxyethyl)amino, a di-(2-hydroxypropyl)amino, an N-(2-hydroxyethyl)-N-methylamino, an aspartic acid, an iminodiacetic acid or a morpholino residue.

7. **(previously presented)** A composition according to claim 1, in which M represents hydrogen, lithium, potassium, sodium, ammonium, mono-, di-, tri- or tetra-C₁-C₄alkylammonium, mono-, di- or tri-C₁-C₄hydroxyalkylammonium or ammonium that is di- or tri-substituted with a mixture of C₁-C₄alkyl and C₁-C₄hydroxyalkyl groups.

8. **(original)** A composition according to claim 7, in which M represents hydrogen, potassium or sodium.

9. **(currently amended)** A process for the preparation of the compound mixture of formulae (1a), (1b) and (1c) of claim 1 which process comprises by reacting, under known reaction conditions, cyanuric chloride, successively, in any desired sequence, with each of ~~4,4'-diaminostilbene-2,2'-disulphonic acid, aniline or an aniline derivative, an amino compound R₁H and an amino compound R₂H, or, alternatively a mixture of amino compounds R₁H and R₂H, R₁ and R₂ being as defined in claim 1.~~

i) 4,4'-diaminostilbene-2,2'-disulphonic acid,

ii) aniline or aniline substituted by C₁-C₄alkyl or C₁-C₄alkoxy,

iii) an amino compound R₁H and

iv) an amino compound R₂H

or, alternatively

i) 4,4'-diaminostilbene-2,2'-disulphonic acid,

ii) aniline or aniline substituted by C₁-C₄alkyl or C₁-C₄alkoxy, and

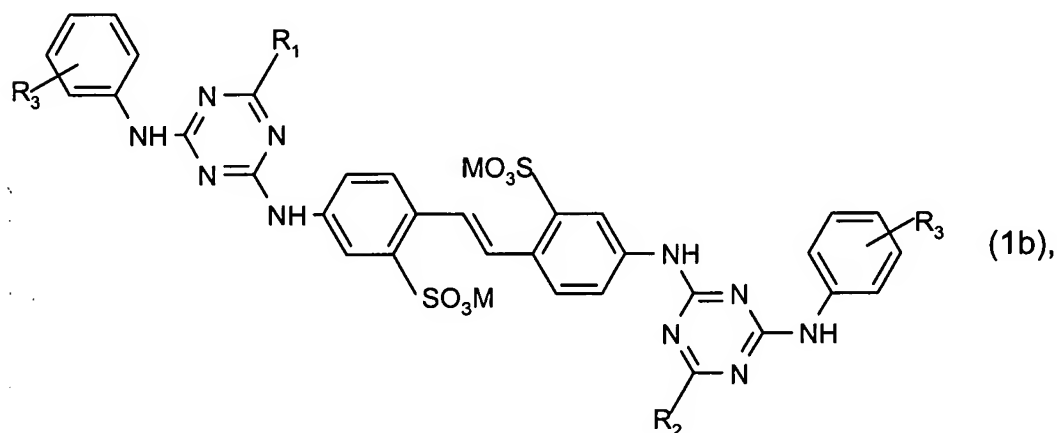
iii) a mixture of an amino compound R₁H and an amino compound R₂H

wherein R₁ and R₂ are different and

R₁ represents -NH₂, -NHC₁-C₄alkyl, -N(C₁-C₄alkyl)₂, -NHC₂-C₄ hydroxyalkyl, -N(C₂-C₄hydroxyalkyl)₂, -N(C₁-C₄alkyl)(C₂-C₄ hydroxyalkyl), a morpholino, piperidino or pyrrolidino residue and

R₂ represents -NH₂, -NHC₁-C₄alkyl, -N(C₁-C₄alkyl)₂, -NHC₂-C₄ hydroxyalkyl, -N(C₂-C₄hydroxyalkyl)₂, -N(C₁-C₄alkyl)(C₂-C₄ hydroxyalkyl), a morpholino, piperidino or pyrrolidino residue or an amino acid or an amino acid amide residue from which a hydrogen has been removed from the amino group.

10. (currently amended) A compound of the formula



in which

R₁, R₂, R₃ and M are as defined in claim 1.

R₁ and R₂ are different and

R₁ represents -NH₂, -NHC₁-C₄alkyl, -N(C₁-C₄alkyl)₂,

-NHC₂-C₄ hydroxyalkyl, -N(C₂-C₄hydroxyalkyl)₂, -N(C₁-C₄alkyl)(C₂-C₄ hydroxyalkyl), a morpholino, piperidino or pyrrolidino residue,

R₂ represents -NH₂, -NHC₁-C₄alkyl, -N(C₁-C₄alkyl)₂, -NHC₂-C₄ hydroxyalkyl, -N(C₂-C₄hydroxyalkyl)₂, -

N(C₁-C₄alkyl)(C₂-C₄ hydroxyalkyl), a morpholino, piperidino or pyrrolidino residue

or an amino acid or an amino acid amide residue from which a hydrogen has been removed from the amino group.

R₃ represents hydrogen, C₁-C₄alkyl or C₁-C₄alkoxy and

M represents hydrogen, an alkali metal atom, ammonium or a cation formed from an amine.

11. (previously presented) A composition for whitening synthetic or natural organic materials, which composition contains water, a fluorescent whitening agent comprising a mixture of the compounds:

(1a), (1b) and (1c), according to claim 1, and, optionally, one or more auxiliaries selected from the group consisting of dispersants, water retention aids, biocides and adjuvants.

12. **(previously presented)** A method for adding optical brightening agents to paper which method comprises the step of applying a composition of claim 11 either to a paper substrate in a pulp mass, to a paper substrate in a size-press, to a paper substrate in a metering press or contacting a paper surface with a coating application comprising a composition of claim 11.

13. **(withdrawn)** Paper, which has been optically brightened by a fluorescent whitening agent according to claim 1.

14. **(previously presented)** A method, for increasing the Sun Protection Factor (SPF) rating or for the fluorescent whitening of a textile fibre material which method comprises the step of treating said textile fibre material with a composition of claim 11.

15. **(withdrawn)** A textile fabric produced from a fibre, which fibre is treated with the compound mixture of formulae (1a), (1b) and (1c) according to claim 1.

16. **(new)** A process according to claim 9, wherein cyanuric chloride is initially reacted with 4,4'-diaminostilbene-2,2'-disulphonic acid.

17. **(new)** A process according to claim 16, wherein cyanuric chloride is initially reacted with 4,4'-diaminostilbene-2,2'-disulphonic acid, followed by reaction with aniline or aniline substituted by C_1 - C_4 alkyl or C_1 - C_4 alkoxy and then with a mixture of amino compounds R_1H and R_2H .